

KOBELEV, V.A. [deceased]; MUSHENKO, D.V.; TELEGIN, V.G.; TEREBILOVA, M.A.

Removal of fluorine from alkylates by means of copper-aluminum alloys.

Trudy VNIINeftekhim no.3:219-222 '60. (MIRA 14:2)

(Alkyl fluorides)

(Fluorine)

5-3300
5-1190

AUTHORS:

Mal'manov, G. M., Bursin, V. E., Barinov, Z. J.,
Kozlov, I. A., Telezh, V. G.

2/15/60/003/02/29/034
2011/2506

TITLE:

Catalytic Isomerization of n-Pentane

PHYSICAL:

Investiya vishchikh naboynkh svoistva. Khimiya i
khimicheskaya tekhnologiya, 1960, Vol. 5, No. 2, pp. 358-363

Advantages which complicate isomerization. In the years 1953 and 1954, i.e. at a much earlier date than the USA (see below 1953), the authors developed a process for isomerizing normal paraffins (C₅-C₆) (from butane to heptane inclusively) (see, 5,6) which is substantially different from the American process. Tungsten sulfide and Pt specially prepared platinum catalysts were used. They are catalytically active around 100°, so that the reaction proceeds only at increased pressure in presence of hydrogen and by circulating the gas. The catalysts are discussed. The tungsten sulfide W₂S₃ proved to be most suitable. Characteristic data on its mode of action in n-butane isomerization are

Card 1/3

given in Table 2. Under normal conditions, W₂S₃ is fairly insensitive to poisoning. After 1500 h however, the degree of isomerization of n-butane drops from 58.5% to 54%. The stability of W₂S₃ can be maintained by adding slight quantities of sulfur to the raw material. This complicates the technical process and corrodes the apparatus. In the case of platinum on fluorinated aluminum oxide, the authors investigated the effect of an increase in fluorine content on the activity of the catalyst. It is seen from the results obtained, that the Al-Pt catalyst, prior to activation with fluorine, does not catalyze the isomerization of n-butane (Fig. 1). A further rise in the F content (up to 15%) increases the activity but slightly. Table 1 shows the specific increase of the catalyst as a function of the F content. The above-mentioned increase in activity cannot be explained by an increase in the specific surface alone, but is also due to changes in the chemical- and physical properties of the catalyst. The activity of 0.6% platinum on an aluminum sulfate carrier can be increased greatly by changing the properties of the catalyst (Table 2). The results obtained using 0.6% palladium on aluminum silicate (Table 2) were even better than those obtained with Pt (5% yields of isopentane). Palladium

Card 2/3

on aluminum silicate can therefore be applied as a suitable substitute for platinum on the same carrier. Finally the authors describe the technical process and give a basic scheme of the isomerization apparatus (Fig. 2). This paper was read at the Vsesoyuznaya Konferentsiya "Poli-sistemy kishcheykh produktov dlya polucheniya vysokopolimernykh" (All-Union Conference "Ways for Synthesizing Initial Materials for the Preparation of Higher Substances") held at Leningrad from September 27 to October 2, 1959. The specific surface was determined by G. M. Kozlovskiy. There are 2 figures, 2 tables, and 17 references, 9 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut nefte-khimicheskikh produktov (All-Union Scientific Research Institute of Petroleum-chemical Products)

Card 3/3

S/064/61/000/011/005/007
B110/B101

AUTHORS: Telegin, V. G., Sidorov, V. A.

TITLE: Alkylation of toluene by propylene on solid catalysts

PERIODICAL: Khimicheskaya promyshlennost', no. 11, 1961, 65 - 67

TEXT: The authors produced cymenes from toluene and propylene in a vertical steel vessel, 930 mm high (inner diameter = 35 mm) with an immobile catalyst layer. The reaction zone (total height = 273 mm) was bounded by steel inserts and filled with the following layers: (1) Raschig glass rings, (2) 100 ml of catalyst "phosphoric acid on kieselguhr" (97 mm layer thickness), (3) Raschig glass rings. The Ufa industrial catalyst of 1960 consisted of: H_2O = 5.4%, P_2O_5 free = 18.0%, P_2O_5 total = 60.3%, activity = 98.7%, mechanical strength = 26.1 kg/tablet. The apparatus used for the alkylation of aromatics with olefins on immobile catalysts consists of 10 main units which may be combined according to the gaseous raw material and its purity. When using a propane - propylene fraction containing ~30% propylene, the calculated toluene was pumped in (Fig.) while the fraction was added dropwise from a burette under a

Card 1/2

Alkylation of toluene by...

S/064/61/000/011/005/007

B110/B101

nitrogen pressure of 45 - 50 at. The reaction products were put into a high-pressure receiver, then together with waste gases periodically filled into a low-pressure receiver to be tested for unsaturated compounds.

Alkylate liberated from excess toluene and gases was fractionated on a column with 10 theoretical plates. The authors studied the effect of (a) the molar ratio toluene : propylene, (b) volume velocity, (c) the pressure in the reaction vessel, and (d) the temperature on the alkylate yield and ratio of isomers. When the ratio was changed from 1 : 1 to 18 : 1, the former ratio was found to cause a considerable increase of polyisopropyl toluenes. With an optimum range of 2 : 1 - 5 : 1, 92 - 97% monoisopropyl toluenes were obtained. The optimum volume velocity was at 1 - 2 hr⁻¹; ✓

volume velocity in hr⁻¹ - conversion degree in %: 2 - 90.6, 4 - 73.0, 8 - 44.5. A change of the pressure between 25 - 30 at was ineffective. Between 100 and 300°C, maximum yields (46 - 15% with respect to the passing toluene, conversion degree = 92%) were obtained at 250 - 275°C, a volume velocity of 2 hr⁻¹, a pressure of 25 - 30 at, and a molar ratio of 2 : 1 - 5 : 1. Temperature reduction to 100 - 150°C reduced the conversion degree to 40 - 50%, and the alkylate yield to 70 - 80%. Gradual temperature reduction to 100°C caused higher yields of o- (59.1%) and lower

Card 2/4 3

Alkylation of toluene by...

S/064/61/000/011/005/007
B110/B101

yields of m-isopropyl toluene (17.2%). At 200 - 275°C, the yields of m-(30%) and p-isomer (30%) increased at the expense of o-isomer (40.0%). This increase of m-isomer is explained by its higher thermodynamic stability and selectivity reduction of the reaction. The reaction can thus be oriented by choice of catalyst and temperature. When using a coarsely porous aluminum silicate catalyst, the m-isomer yield increased with temperature. The effect of the degree of catalyst acidity on the ratio of isomers has still to be studied. There are 1 figure, 2 tables, and 6 references: 3 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: M. Kutz et al., J. Org. Chem., 16, no. 5, 699 (1951); F. E. Condon, J. Am. Chem. Soc., 71, no. 10, 35 (1949); J. M. Berry, E. E. L. Reid, J. Am. Chem. Soc. 49, 3142 (1927).

Card 3/ 3

TELEGIN, V.G.; SIDOROV, V.A.

Alkylation of toluene with propylene on solid catalysts. Khim.
prom. no. 11:807-809 N '61. (MIRA 15:1)
(Toluene) (Propene)

TELEGIN, V.G.; SIDOROV, V.A.; KHARCHENKO, A.A.; ZHARKOVA, D.R.; TREYBSHO, Ye.I.

Obtaining ditolyl ethane. Nefteper. i neftekhim. no.1:
34-39 '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhim-
icheskikh protsessov, Leningrad.

ACCESSION NR: AP4026847

S/0065/64/000/004/0003/0006

AUTHOR: Telegin, V. G.; Sidorov, V. A.; Zharkova, D. R.; Biryukova, L. M.; Tokareva, A. A.

TITLE: Preparation of individual vinyltoluenes

SOURCE: Khimiya i tekhnologiya topliv i masel, ⁹no. 4, 1964, 3-6

TOPIC TAGS: Vinyltoluene, preparation, synthesis, vinyltoluene isomer, separation, ethyltoluene, toluene ethylation, dehydrogenation, isomer separation, fractionation, dealkylation, cracking, disproportionation

ABSTRACT: The study was made to determine if it is possible to prepare individual vinyltoluenes or at least mixtures of the vinyltoluenes enriched in one of the isomers. Ethyltoluenes were made by continuous vapor phase ethylation of toluene with phosphoric acid catalyst. Since it is difficult to separate the dehydrogenation products of ethyltoluene, the ethyltoluenes were separated prior to dehydrogenation. The ortho isomer was fractionated and the remaining mixture of meta and para isomers was sulfonated and the ethyltoluene sulfo acids were hydrolysed. The separated isomers were then dehydrogenated in the presence of water (water: hydrocarbon ratio 22:1) at 580C at a flow rate of 0.75 hrs⁻¹ on a catalyst

Card 1/2

ACCESSION NR: AP4026847

comprising 87% Fe_2O_3 , 8% Cr_2O_3 and 5% K_2O . Based on ethyltoluene the yield was 94-96%; exhaust gases comprised 76-78% H_2 , 19-21% CO_2 and 2-4.6% hydrocarbons. Products were fractionated at 8 mm. Hg. The purest vinyltoluene isomer prepared was the ortho, containing 5-7% para-isomer. The other two isomers were contaminated with larger amounts of mixed isomers. In comparison to dehydrogenation of ethylbenzene, dehydrogenation of ethyltoluene is accompanied by undesirable dealkylation, cracking and disproportionation reactions, and the catalyst activity is rapidly lowered so it must be regenerated after each cycle. Further work is needed on the purification of the individual ethyltoluenes and on their dehydrogenation to obtain individual vinyltoluenes containing a minimum of contaminating isomers. Orig. art. has: 3 tables.

ASSOCIATION: VNIINeftekhim (All Union Scientific Research Institute of Petrochemical Processes)

SUBMITTED: 00

DATE ACQ: 28Apr64

ENCL: 00

SUB CODE: CH

No. REF. SOV: 005

OTHER: 007

Card 2/2

TELEGIN, V.G.; GUTCHIK, G.H.

Equilibrium of the ammonia synthesis reaction at the pressures
above 1000 atm. Zhur. prikl. khim. 37 no.10:2303-2305 1964.
(MIRA 17:11)

L 35525-65 EWG(j)/ENT(m)/EPF(c)/EWP(j)/T/ENA(h)/ENA(l)
ACCESSION NR: AP5008205

PC-4/Pr-4/Peb RM
S/0286/65/000/005/0071/0072

AUTHORS: Gunder, O. A.; Grachev, N. M.; Popilin, O. N.; Lifits, A. L.; Ponomareva, Yo. N.; Telogin, V. G.; Tokareva, A. A.

TITLE: A method for producing plastic scintillators. Class 39, No. 168884

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 71-72

TOPIC TAGS: plastic, scintillator, polymerization

ABSTRACT: This Author Certificate presents a method for producing plastic scintillators by thermal polymerization in bulk of vinyl toluene in the presence of phosphors. In order to increase the light output and the heat resistance of the scintillators, a mixture of ortho- and paravinyl toluene is used for the vinyl toluene isomers.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov (All-Union Scientific Research Institute of Single Crystals)

SUBMITTED: 06Mar64

ENCL: 00

SUB CODE: MT, OP

NO REF SOV: 000
Card 1/1

OTHER: 000

SIDOROV, V.A.; TELEGIN, V.G.

Isomerization of cymenes on various catalysts. Khim. i tekhn. topl.
i masel 10 no.2:13-19 F '65.

(MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh
protsessov.

TELEGIN, V.G.; SIDOROV, V.A.; KHARCHENKO, A.A.

Operation of a reactor with shielded electric motor in the
production of ditolyl ethane. Khim. prom. 42 no.9:666-668
S '65. (MIRA 18:9)

TELEGIN, V.G.; SIDOROV, V.A.

Alkylation of toluene with acetylene in a reactor with a
screened electric motor. Khim. prom. no.8:567-570 Ag '63.
(MIRA 16:12)

TELEGIN, V.I.

Materials on the nutrition of the teleutca squirrel (*Sciurus vulgaris exalbidus* Pallas). Trudy Biol. inst. Zap-Sib. fil. AN SSSR
no.1:111-114 '56 (MIRA 10:4)
(ALTAI TERRITORY--SQUIRRELS)

TELEGIN, V.N.

Changes in the peripheral nervous system under the influence of multiple injections of therapeutic doses of aminazine. Nauch. trudy Riaz. med. inst. 15:136-137 '62. (MIRA 17:9)

1. Kafedra patologicheasoy anatomii (zav. kafedroy - prof. B.K.Baletskiy) Ryazanskogo meditsinskogo instituta imeni Pavlova.

DOKUKIN, A.F.; TELMOIN, V.P.

Hematological characteristics of Wuerttemberg-fat-tailed hybrid
sheep in the high mountain regions of Kirghizia. Trudy Biol.inst.
KirFAN SSSR no.3:17-21 '50. (MIRA 8:5)
(KIRGHIZISTAN--SHEEP)
(BLOOD--ANALYSIS AND CHEMISTRY)

TELEGIN, V. P. ~~Doc~~ Cand Biol Sci -- (diss) "Changes in
oxidizing properties of blood, energy metabolism and *yolk of wool*
~~suint~~ of sheep under various functional conditions of *the*
thyroid gland." Frunze, 1957. 16 pp 21 cm. (Kirgiz Agri-
cultural Inst im K.I. Skryabin), 110 copies
(KL, 21-57,100)

-36-

TELEGIN, V.P.

Iodine content and structure of the thyroid gland subjected to various influences. Trudy Inst. zool. i paraz. AN Kir. SSR no.6: 241-249 '57. (MIRA 11:3)

(Thyroid gland) (Iodine)
(Kirghizistan--Sheep--Physiology)

Cond
TELEGIN, V. P.: Master Biol Sci (diss) -- "Changes in the oxidative properties of the blood, energy exchange, and the yolk of wool on sheep in various functional states of the thyroid gland". Frunze, 1958. 15 pp (Kirgiz Agric Inst), 200 copies (KL, No 5, 1959, 147)

ZIMIN, P.A., kand.tekhn.nauk; TELEGIN, V.Ya., inzh.; KOTENIN, S.A., inzh.

Mechanization of the manufacture of reinforcement for the Moscow
television center tower. Mont. i spets. rab. v stroi. 23 no.9:
21-23 S '61. (MIRA 14:9)

1. Nauchno-issledovatel'skiy institut stroitel'noy promyshlennosti.
(Moscow--Television--Transmitters and transmission)
(Concrete reinforcement)

TELEGIN, Yaroslav Ivanovich; POTAPOV, Vladimir Ivanovich

[Agriculture in the Chinese People's Republic] Sel'skoe
khoziaistvo Kitaiskoi Narodnoi Respubliki. Moskva, Znanie,
1958. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniui
politicheskikh i nauchnykh znani. Seria 3, No.34)

(China--Agriculture)

(MIRA 12:6)

ZOLOTAREV, V.I.; PEKSHEV, Yu.A.; AVSENEV, Yu.M.; KAPRANOV, I.A.; KISVYANTSEV, L.A.; SHVETSOV, N.I.; TELEGIN, Ya.I.; POTAPOV, V.I.; KISVYANTSEV, L.A.; ZYKOV, A.A.; NETRUSOV, A.A.; SENIN, V.P.; MAKSIMOVA, A.P.; NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; KALASHNIKOV, A.A.; PLAKSIN, S.V.; POPOV, N.N.; KARSHINOV, L.N.; YAKIMOVA, T.A.; BASHKANIKHIN, I.K.; KETKOVICH, A.Ya.; SHALASHOV, V.P.; VORONKOV, F.N.; VEKSHIN, G.K.; CHISTYAKOV, M.A.; IVANOV, N.I., red.; SLADKOVSKIY, M.I., red.; LEPNIKOVA, Ye., red.; MOSKVINA, R., tekhn.red.

[Economic development of the people's democracies] Razvitie ekonomiki stran narodnoi demokratii; obzor za 1957 g. Pod red. N.I. Ivanova i dr. Moskva, Izd-vo sots.-ekon.lit-ry, 1958. 619 p.
(MIRA 12.7)
1. Moscow. Nauchno-issledovatel'skiy kon'yunktorny institut.
(Economic conditions)

SOLOPAREV, V.I.; PEKSHEV, Yu.A.; LENSKIY, B.V.; AVSENEV, Yu.M.;
KISVYANTSEV, L.A.; SHVETSOV, N.I.; TELEGIN, Ye.I.; ZYKOV, A.A.;
SENIN, V.P.; METRUSOV, A.A.; GAVRILOV, V.V.; NIKOLAYENKO, Zh.I.;
VOLKOV, N.V.; KALASHNIKOV, A.A.; PLAKSIN, S.V.; POPOV, N.N.;
KARSHINOV, L.N.; YAKIMOVA, T.A.; SHALASHOV, V.P.; KOSONOGOV, L.A.;
PUSENKOV, N.N.; SLADKOVSKIY, M.I., red.; IVANOV, N.I., red.;
LEPNIKOVA, Ye., red.; MOSKVINA, R., tekhn.red.

[Economic development in the people's democracies; review for
1958] Razvitie ekonomiki stran narodnoi demokratii; obzor za
1958 g. Pod red. M.I.Sladkovskogo i dr. Moskva, Izd-vo sotsial'-
no-ekon.lit-ry, 1959. 358 p. (MIRA 13:7)

1. Moscow. Nauchno-issledovatel'skiy kon'yunktorny institut.
(Communist countries--Economic conditions)

PEKSHEV, Yu.A.; LENSKIY, B.V.; AVSENOV, Yu.M.; MILONOV, V.S.; KISVYANTSEV, L.A.; TELEGIN, Ya.I.; POTAPOV, V.I.; NETRUSOV, A.A.; ZYKOV, A.A.; KUDIN, B.M.; MAKSI-MOVA, A.P.; NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; SHVETSOV, N.I.; PLAKSIN, S.V.; POPOV, N.N.; KARSHINOV, L.N.; YAKIMOVA, T.A.; SHALASHOV, V.P.; VISYANIN, Yu.L.; KRASNOV, L.V.; PUSENKOV, N.N.; IVANOV, N.I., red.; ZOLOTAREV, V.I., red.; SLADKOVSKIY, M.I., red.; LEPNIKOVA, Ye., red.; KOROLEVA, A., mladshiy red.; NCGINA, N., tekhn. red.

[Economic development of the people's democracies; survey for 1959]
Razvitie ekonomiki stran narodnoi demokratii; obzor za 1959 god. Pod red. N.I. Ivanova i dr. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1960. 305 p.
(MIRA 14:6)

1. Moscow. Nauchno-issledovatel'skiy kon'yukturnyy institut.
(Europe, Eastern—Economic conditions)

UGRYUMOV, V.M., prof., otv. red.; BEKHTELEVA, N.P., doktor med. nauk,
red.; VOLKOV, A./n., red.; DOLGOPOLOVA, G.A., red.; NIKIFOROV,
B.M., red.; RACHKOV, B.M., red.; RASTORGUYEV, A.V., red.;
TELEGINA, A.A., red.; YATSUK, S.L., red.; LEVIN, M.V., tekhn.
red.

[Proceedings of the Fourth Joint Scientific Conference of Young
Neurosurgeons] Chetvertaia ob"edinennaia nauchnaia konferentsiia
molodykh neirokhirurgov, trudy. Leningrad. Medgiz. 1961. 414 p.
(MIA 15:6)

1. Ob"yedinennaya nauchnaya konferentsiya molodykh neyrokhirurgov,
4th. 2. Leningradskiy neyrokhirurgicheskii institut im. prof. A.L.
Polenova (for Volkov, Dolgopolova, Yatsuk, Rachkov). 3. Laboratoriya opera-
tivnoy neyrokhirurgii Leningrad'skogo neyrokhirurgicheskogo insti-
tuta imeni prof. A.L.Polenova (for Nikiforov, Telegina). 4. Ka-
fedra operativnoy khirurgii pediatricheskogo meditsinskogo instituta,
Leningrad (for Nikiforov, Telegina, Yatsuk). 5. Direktor Leningrad-
skogo nauchno-issledovatel'skogo neyrokhirurgicheskogo instituta
im. prof. A.L.Polenova (for Ugryumov).

(NERVOUS SYSTEM---SURGERY)

TELEGINA, A.A.

Experimental intraosseous diploe- and sinusography. Eksp. kh'r.
i anest. 7 no.4:12-16 J1-Ag, '62. (MIRA 17 5)

1. Iz kafedry operativnoy khirurgii (zav. - prof. Ye.M.Margorin)
Leningradskogo pediatricheskogo meditsinskogo instituta i laboratorii
operativnoy neyrokhirurgii (zav. - prof. Ye.M.Margorin)
Leningradskogo nauchno-issledovatel'skogo neyrokhirurgicheskogo
instituta imeni Polenova (dir. - deystvitel'nyy chlen AMN SSSR
prof. V.N.Shamov).

1954. TELEGINA E. Hematol. odd. Centr. Lab. ÚNZ-ÚNV. Fak. Poliklin., Praha.
*O reparaibilní megaloblastické anemii kojenců. Reparable megaloblastic anaemia of infants CSL. PEDIAT. 1955, 10/8 (622-628)
The paper deals with megaloblastic anaemia in infancy, which either spontaneously or after treatment with vit. B₁₂ or folic acid can definitely be cured. There occurs in the infancy still another type of megaloblastic anaemia (which is not dealt with in this paper), which like cryptogenous pernicious anaemia in the adult, shows the tendency to recurrence after the treatment by vit. B₁₂ had been stopped. The clinical picture can have very different aspects, the single common feature of it being the anaemia with megaloblastic bone marrow. The deficiency especially of folic acid and of its derivative, folinic acid, is considered to be the very causative principle in the development of this anaemia. Infection, rapid growth, other vitamin deficiency, especially vit. C deficiency, general nutritive insufficiency of the mother tend to aggravate this deficiency or directly induce the anaemia. Prematurely born infants suffer frequently from this sort of anaemia. Finally, the comparison of curable megaloblastic anaemia of infants with cryptogenous pernicious anaemia of the adult is given.
Tělegina - Prague (VII, 6)

PERMYAKOV, S.I., kand.tekhn.nauk; TELEGINA, I.A., inzh.

Building large-panel apartment houses out of air-entrained fly-
ash concrete. Trudy NIISF no.1:80-94 '62. (MIRA 15:11)
(Apartment houses) (Lightweight concrete)

USSR / Structure of Deformed Materials.

E-8

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9402

Author : Kolontsova, Ye. V., Telegina, I.V., Plavnik, G.M.
Title : Concerning the Structure of Fault Band of Certain Ionic Crystals.

Orig Pub : Kristallografiya, 1956, 1, No 4, 419-424

Abstract : X-ray photographs with a narrow beam were made of single crystals of CsI and TlI-TlBr single crystals, deformed by compression, and first studied in polarized light. Inside the fault band there were observed portions of a crystal, which appeared to be twins relative to the initial crystal.

Card : 1/1

TELEGINA, I.V.

AUTHORS: Kolontsova, Ye.V. and Telegina, I.V.

70-5-15/31

TITLE: The Influence of the Conditions of Deformation on the Mechanism of the Formation of Kink Bands (Vliyaniye usloviy deformatsii na mekhanizm obrazovaniya polos sbrosa)

PERIODICAL: Kristallografiya, 1957, Vol.2, No.5, pp.658-662 (USSR).

ABSTRACT: Using X-ray Laue photographs the structure of kink bands in single crystals of Sn deformed by extension was examined. The influences of the rate of deformation and the initial orientation of the crystal on the form and structure of the bands were observed. Under certain definite conditions twinning of the parent crystal at the edges of the kink band is observed. The extensions used were about 300 - 350%, the specimen was cylindrical and the tension was applied along its axis. Kink bands were observed for any initial orientation of the crystal almost up to that least favourable for slipping when the direction of slipping makes an angle of 45° with the direction of the tension. The external form of the crystal after deformation depended on the rate of extension (slow-extensions in about 1 min; rapid- extension in a fraction of a second). For slow deformation the representation of the mechanism as due to dislocations (Barrett, J. Metals, 9, 599, 1949) was appropriate. For high rates of deformation where there was a non-uniform

Card 1/2

The Influence of the Conditions of Deformation on the Mechanism of
the Formation of Kink Bands. 70-5-15/31

stress distribution, the structure of the bands is better described by the mechanism proposed by Orowan (Nature, 149, 643, 1942), as the length and direction of the line, along which the lines of slip deviate sharply from the initial direction, depend substantially on the specimen and the conditions of deformation. The experiments show that this line is the trace of the twin plane. Thus, for crystals of CsBr the index of this direction [131], determined optically, to the indices of the twin plane 114 determined from the Laue photographs. There are 4 figures and 8 references, 4 of which are Slavic.

ASSOCIATION: Moscow State University im. M. V. Lomonosov (Moskovskiy Gosudarstvennyy Universitet im. M. V. Lomonosova)

SUBMITTED: February 22, 1957.

AVAILABLE: Library of Congress.

CARD 2/2

TELEGINA, I. V.

AUTHORS: Kolontsova, Ye. V., Telegina, I. V.

20-4--22/51

TITLE: Note on the Mechanism of the Formation of Dispersion Bands (O mekhanizme obrazovaniya polos sbrosa).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 4, pp. 605-608 (USSR)

ABSTRACT: For the purpose of proving the existence of twins within the displacement ("kink") bands, the present paper investigates the structure of CsBr monocrystals deformed (by pressure). For this purpose samples of Caesium bromide ($4 \times 4 \times 25 \text{ mm}^3$) were compressed in a direction inclined by 15-20 degrees to the [100] direction. The structure of the "displacement" bands originating on this process were studied in polarized light and with the help of X-ray diagrams according to the method of Laue. Then the samples were cut to pieces and polished. These new samples were again investigated by X-rays. The investigation of the displacement bands in CsBr crystals shows the following facts: The dislocation lines suffer a sharp bend (just like in CsJ and TlJ-TlBr-crystals) in the domains in the vicinity of a distinct surface rupture along a certain line starting from an external crystals surface. The distinctness of the dis-

Card 1/3

Note on the Mechanism of the Formation of Dispersion Bands 20-4-22/51

placement band depends on the angle of the bend. The absorption bands are the more marked, the greater the value of this angle is. On roentgenograms, which have been taken from the domains near the bend line, distinct and extended interference maxima can be observed. The dimensions of the interposed twin layers depend on the object under investigation and on its stressing. Ordinarily, the twin domain is represented in the caesium-bromide crystals investigated here by a complete system of single crystal domains, which are rotated symmetrically. A further possibility for the explanation of the existence of different crystallographic interlinking faces is the approximately similar facility of the transformation of the lattice on a twin formation in the $[11n]$ planes. According to a comparison of the computed and of the experimental values it may be assumed, that the twin formation in crystals of the CsCl type (which is observed within the "displacement" band) may take place on different crystallographic planes of the $[1n0]$ and $[11n]$ type. Further details are given. There are 3 figures, and 11 references, 5 of which are Slavic.

Card 2/3

Note on the Mechanism of the Formation of Dispersion Bands 20-4-22/51

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvenny universitet im. M. V.
Lomonosova)

PRESENTED: January 24, 1957, by G. V. Kurdyumov, Academician

SUBMITTED: January 14, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Kolontsova, Ye.V. and Telegina, I.V. SOV/70-3-1-15/26

TITLE: The Investigation of Deformed Crystals of NaCl by means of an X-ray Microbeam (Issledovaniye deformirovannykh kristallov NaCl s pomoshch'yu mikropuchka rentgenovskikh luchey)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 1, pp 86-88 (USSR)

ABSTRACT: Crystals of NaCl which were known, from optical observations in polarized light, to have undergone deformation by slipping in certain regions were examined by a microbeam technique. The regions visible were about 150 μ across. X-ray Laue pictures were taken of regions localizable to 15 μ . Slits of width 30 μ were used and also circular diaphragms of diameter 1.5 mm, 0.15 mm and 15-20 μ . A tube with a W target was used. Deformed crystals which had been marked initially with one scratch were examined. The Laue spots were drawn out but not split so that slip regions must be less than 1 μ thick. The rotation of mosaic blocks was shown to be $[001]$, the slip plane being (110) and the slip direction $[1\bar{1}0]$. The angle of rotation was about 1° . Entirely different

Card1/2

SOV/70-3-1-15/26
The Investigation of Deformed Crystals of NaCl by Means of an
X-ray Microbeam

pictures were obtained when a region where the continuous band (between crossed Nicols) was crossed by bright bands was examined. Here, the interference spots were seen to be broken up, the angle of rotation being about 2° about the same axis. Crystals which had been marked with six scratches behaved somewhat differently. The scratches were made in the [001] direction on the 100 faces of the crystals and observations (optical and X-ray) were made in the same direction. There are 1 figure and 7 references, 4 of which are Soviet and 3 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)
SUBMITTED: May 14, 1957

Card 2/2

AUTHORS: Kolontsova, Ye.V. and Telegina, I.V. 70-3-3-14/36
 TITLE: A Possible Mechanism for Twinning in Crystals of
 CsJ and CsBr (Vozmozhnyy mekhanizm dvoynikovaniya v
 kristallakh CsJ i CsBr)
 PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 3, pp 334 - 338
 (USSR)

ABSTRACT: The atomic displacements which must occur on the re-orientation of a crystal on deformation in twinning are examined. It is established that for the majority of twin planes the least displacements correspond to displacements of the atoms in rings analogous to those occurring in ring diffusion processes. Previous X-ray observations, although somewhat difficult, show the twin plane in CsJ and CsBr to be near 411. There are several planes, 150, 113, 114, 115, 125 and 127 all of which lie near to the possible direction. A diagram is given of the body-centred cubic type of lattice of CsJ and CsBr before and after twinning on the planes 114 and 103. It is shown that there are circular chains of displacements which would convert one lattice into the twinned lattice. There are 4 or 6 members in each ring. The root mean square atomic displacement on twinning on different planes \bar{s} is calculated in terms of the unit cell side as follows: for 120 and 130 0.16, for 150 0.17, for 140 0.19, for 112 and 111 0.22,

Card1/2

70-3-3-14/36

A Possible Mechanism for Twinning in Crystals of CsJ and CsBr

for 115 0.28, for 114 0.29, for 113 0.33, for 127 0.39 and for 125 0.41. In fact twinning seems to occur on 150, 113, 114 and 115. Body-centred crystals with ions of only one sort give quite different theoretical results. Here \bar{s}^2 is very much lower for 112 than for any other plane. There are 2 figures and 12 references, 9 of which are Soviet and 3 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)

SUBMITTED: April 6, 1957

Card 2/2

SOV/70-4-4-19/34

AUTHORS: Kolontsova, Ye.V. and Telegina, I.V.

TITLE: On the Possibility of Studying the Non-uniformities in the Plastic Deformation of Single Crystals by Means of a Microbeam of X-rays

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 4, pp 587-589 (USSR)

ABSTRACT: With a microbeam camera RKS0, fitted with accessories from an optical bench, specimens could be set to 1μ in a 15μ X-ray beam. Crystals of CsCl, Sn and NaCl have been examined. It is concluded that a 15μ beam is suitable for showing up non-uniformities of dimensions $\geq 100 \mu$. For some problems, such as strain on twinning, slip-band structure, etc., beams of $< 1 \mu$ dia are needed. A 15μ beam used on the twin boundary of a calcite crystal showed nothing of a 0.2μ strained region expected from etching experiments. Preparation of a suitable pinhole is a major difficulty and fine-focus tubes of high specific loading are essential. Another method of examining deformed crystals is the topographic method of Lang (Ref 11).

Card1/2

SOV/70-4-4-19/34

On the Possibility of Studying the Non-uniformities in the Plastic
Deformation of Single Crystals by Means of a Microbeam of X-rays

There are 16 references, of which 14 are Soviet, 1
English and 1 international.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)

SUBMITTED: August 22, 1958

Card 2/2

L 2436-66 EWT(1)/EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c)
IJP(c) JD/JW /JG/GG/GS

ACCESSION NR: AT5023806 UR/0000/62/000/000/0264/0267

AUTHOR: Telegina, I. V.; Kolontsova, Ye. V.; Zubenko, V. V.

TITLE: Radiation damage in lithium fluoride crystals

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheni na materialy. Moscow, 1960, Deystviye yadernykh izlucheni na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya, Moscow, Izd-vo AN SSSR, 1962, 264-267

TOPIC TAGS: lithium fluoride, irradiation damage, neutron irradiation

ABSTRACT: Neutron-irradiated lithium fluoride single crystals were investigated by means of anomalous x-ray scattering with monochromatized Mo radiation. In crystals bombarded with a total flux of $(3-6) \cdot 10^{18}$ n/cm², two-dimensional disturbances oriented along the [100] and [111] planes were observed. Annealing of the crystals eliminates these disturbances almost completely, but even after prolonged annealing at 650C, the disturbances oriented along planes of type (100) are preserved. At annealing temperatures above the melting point of lithium, the separation of metallic lithium having a body-centered Bravais lattice is observed in the irradiated-crystals. Almost no two-dimensional diffraction effects are observed on x-ray powder patterns of single crystals irradiated with a flux up

Card 1/2

L 2436-66
ACCESSION NR: AT5023806

to 1×10^{19} n/cm². It is concluded that an intense radiation annealing takes place during the irradiation. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 18Aug62

ENCL: 00

SUB CODE: NP, 843

NO REF SOV: 002

OTHER: 015

Card 2/2 *nd*

26612
S/070/61/006/005/007/011
E032/E114

24.7200 (1144, 1160)

AUTHORS: Kolontsova, Ye.V., and Telegina, I.V.
TITLE: Unusual effects observed with X-rays scattered off
irradiated and deformed LiF single crystals
PERIODICAL: Kristallografiya, 1961, Vol.6, No.5, pp.768-769
(+ 1 plate)

TEXT: The authors reported an "interesting effect" which they observed in the course of studies of the effect of deformation and neutron irradiation on the structure of LiF crystals. Diffusely scattered X-rays (fixed single crystal; Mo K_{α} radiation) were found to produce on the photographic plate relatively well defined curved lines having a symmetry corresponding to the Laue pattern. These curves have a double structure: on the convex side (to the primary beam) they are "black", i.e. they are stronger than the general background, while on the concave side they are "white", i.e. they are weaker than the general background. In most cases this pattern is observed both with deformed (by compression) and irradiated crystals. Attempts to explain the appearance of these curves (lines) by one-dimensional diffraction

Card 1/2

Unusual effects observed with X-rays... S/070/61/006/005/007/011
E032/E114

26642
were unsuccessful. It is known (R.W. James, Ref.6; "Optical principles of the diffraction of X-rays", Opticheskiye printsipy difraktsii rentgenovskikh luchey, Izd-vo inostr. lit., 1950, pp.398-415) and (A. Guinier, Ref.7: Theorie et technique de la Radiocristallographie, pp.289-295, 1956) that similar "black-white" lines are observed if the X-ray source lies in the crystal itself, or secondary X-ray emission is produced and when a widely divergent primary beam ($\sim 60^\circ$) is employed. In the present experiments the divergence of the beam was less than 2° and the secondary emission was practically absorbed by air before it reached the film. It is concluded that this is a new effect which may possibly be due to dynamic scattering effects in imperfect crystals. There are 2 figures and 7 references: 2 Soviet and 5 non-Soviet, including 1 translation from English into Russian as quoted in the text above.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)

SUBMITTED: March 27, 1961

Card 2/2

TELEGINA, I. V.

90

PHASE I BOOK EXPLOITATION

SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences
USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of
Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR,
1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. P. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/14

90

SOV/6176

The Effect of Nuclear Radiation (Cont.)

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research organization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ -radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

Card 2/14

The Effects of Nuclear Radiation (Cont.)

30V/6176

Pravdyuk, N. P., Yu. I. Pokrovskiy, and V. I. Vikhrov. Effect of Neutron Irradiation on Internal Friction in Mono- and Polycrystals of Zinc

235

Zakharov, A. I. Effect of Neutron Irradiation and Plastic Deformation on Young's Modulus and Internal Friction

242

Konobeyevskiy, S. T., and P. P. Butra. Radiographic Effects in Neutron-Irradiated Crystals

251

Kolontsova, Ye. V. Radiation and Deformation Disturbances in Crystals

257

Telegina, I. V., Ye. V. Kolontsova and V. V. Zubenko. Radiation Disturbances in Crystals of Lithium Fluoride

264

Andronikashvili, E. L., N. G. Polikhov, and L. F. Vorozheykina. Effect of Lattice Disturbances on Mechanical and Optical Properties of Potassium Chloride Crystals.

268

Card 10/14

- 5 -

h3217

S/020/62/147/003/017/027
B104/B186

AUTHORS: Kolontsova, Ye. V., Telegina, I. V.

TITLE: Radiation defects in quartz

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 3, 1962, 592 - 593

TEXT: This is mainly a review of the results in papers (published since 1956) on changes in the crystal structure caused by neutron bombardment. The intensification of the diffuse maxima of X-ray scattering under a neutron flux of up to 10^{19} n/cm² and the considerable changes of the diffraction pattern at a total flux of up to $7 \cdot 10^{19}$ n/cm² are discussed. These changes are: (a) a sixth-order axis of symmetry appears in the place of the third-order axis of symmetry that is characteristic of α -quartz; (b) a halo in the angular range between 60 and 170 is characteristic of the scattering of X-rays from an amorphous substance; (c) the field of interference is limited; (d) the intensity of the Laue patterns decreases, and that of the diffuse maxima increases. The causes of the intensification of the diffuse maxima are discussed. A possible rearrangement of the structure is inferred from the change of the symmetry. It is
Card 1/2

Radiation defects in quartz

S/020/62/147/003/017/027
B104/B186

not possible to conclude from these data whether a β -transition or a re-orientation according to the twinning law takes place. In twinning-law transitions amorphous regions can arise at the boundaries owing to the different densities of crystalline and amorphous quartz. $\alpha \rightarrow \beta$ transitions appear to be possible on neutron bombardment at low temperatures (100 - 200°C). The complete destruction of the crystal structure at a total flux of about $2 \cdot 10^{20}$ n/cm² is explained by the rupture of the covalent bonds when the mutual orientation of the Si-O tetrahedrons is disturbed. There are 2 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: June 6, 1962, by G. V. Kurdyumov, Academician

SUBMITTED: May 29, 1962

Card 2/2

KOLONKOVA, Ye. V.; TELEGINA, I. V.

"Two-dimensional defects in irradiated and in deformed crystals."

report submitted for 6th Gen Assembly, Intl Union of Crystallography, Rome,
9 Sep 63.

Physics Dept, Moscow State Univ.

S/070/63/008/002/003/017
E039/E435

AUTHORS: Zhdanov, G.S., Zubov, V.G., Kolontsova, Ye.V.,
Osipova, L.P., Telogina, I.V.

TITLE: Radiation effects in α -quartz

PERIODICAL: Kristallografiya, v.8, no.2, 1963, 207-212

TEXT: A comparison of the Raman spectra of α -quartz before and after exposure to neutrons is carried out. The structural characteristics are obtained by the Laue method and the anomalous X-ray scattering method. The investigated sample is cut from a block of optical quality Brazilian quartz in the form of a cube $30 \times 30 \times 30$ mm with the edges parallel to the principle axes and is subjected to a fast neutron flux of 7×10^{19} n/cm². This produces a change in density of the quartz from 2.65 to 2.49 g/cm³. The sample acquires an insignificant γ activity, a smoky violet color and the ability to fluoresce (max $\lambda = 5750 \text{ \AA}$). The main features of the spectrum of the irradiated α -quartz are:
a) the spectrum is continuous up to 1500 cm^{-1} ; b) it contains a number of blurred wide maxima; c) in the region 700 to 1500 cm^{-1} the scattering is very similar in character to that of molten
Card 1/2

Radiation effects in α -quartz

S/070/63/008/002/003/017
EO39/E435

quartz; d) the intensity of scattering in the irradiated quartz depends on the orientation of the crystal. The X-ray analysis shows that the third order symmetry C_3 is changed to sixth order C_6 by the irradiation and there is a significant change in the distribution of diffuse scattering. As a result of neutron irradiation, the structure of α -quartz is thought to change in the following manner: 1) Initially, defects develop which lead to a weakening and breaking of the Si-O bond and hence to the possibility of rearrangement in the Si-O tetrahedrons. 2) At a definite stage of the exposure the α -quartz becomes unstable and there is a transition to the more symmetrical high temperature modification. This remains stable at room temperature. 3) There is a complete loss of orientation in parts of the crystal. There are 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V.Lomonosova (Moscow State University imeni
M.V.Lomonosov)

SUBMITTED: July 10, 1962
Card 2/2

ACCESSION NR: AP4024997

S/0070/64/009/002/0282/0284

AUTHORS: Kolontsova, Ye. V.; Telegina, I. V.

TITLE: Change in the structure of pentaerythrite when irradiated with x-rays

SOURCE: Kristallografiya, v. 9, no. 2, 1964, 282-284

TOPIC TAGS: pentaerythrite, x ray, pentaerythrite structure, irradiation, irradiate crystal, reflection intensity, point defect, dislocation, dislocation loop, fragmentation

ABSTRACT: It has been found that the intensity of reflected monochromatic rays from pentaerythrite does not remain constant but increases slightly at first and then declines. The "useful lifetime" of a crystal, when the intensity of reflection is still rather high and to some degree constant, varies from crystal to crystal, generally ranging from 50 to several thousand hours. The authors have investigated the nature of structural change giving rise to this phenomenon. Irradiation was produced by a BSV-1 tube with Mo anode, a current of 10 ma, and a voltage of 45 kv. Irradiation time ranged from 20 to 950 hours. Laue patterns were photographed to trace the structural changes. These were compared with the

Card 1/1

ACCESSION NR: AP4024997

patterns of a crystal not subjected to irradiation. A difference began to appear at 40-50 hours, and irradiated crystals exhibited increased intensity of diffraction maximums and expansion of the Laue spots. These changes became clearer with prolonged irradiation. After 80-100 hours of irradiation, a well-defined asterism appeared on the Laue patterns, a definite indication of separation of the single crystal into separate segments, variously oriented. After about 200 hours, no further reorientation occurred, but the actual time differed for different crystals. It thus appears that the intensity of x-ray reflection weakens because of "fragmentation" in the crystal through irradiation. Decrease in intensity of reflection is due also to radiation defects in the fragments themselves. It is concluded that point defects arise because of the irradiation, and, when the concentration of defects is considerable and their mobility high, they form stable complexes. Changes in the form and size of these complexes at different stages of irradiation explain the changes in intensity of diffraction maximums, the loss of transparency, and the lamination of strongly irradiated crystals. Fragmentation may be related to the "collapse" of these accumulations (complexes) at some definite stage of irradiation and to the formation of dislocation loops, which are free to generate dislocations under proper conditions. Orig. art. has: 2 figures.

ASSOCIATION: Moskoskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University).

Card 2/3

S/0070/64/009/003/0342/0346

ACCESSION NR: AP4039393

AUTHORS: Telegina, I. V.; Kolontsova, Ye. V.

TITLE: Kinetics of oriented defects in irradiated crystals of LiF

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 342-346

TOPIC TAGS: oriented defect, anomalous scattering, lithium fluoride, neutron bombardment, two dimensional defect, diffraction, radiation defect, radiation effect, defect formation

ABSTRACT: The authors have employed anomalous scattering to study the defect structure of single crystals of LiF after neutron bombardment at an integral flux ranging from $5 \cdot 10^{16}$ to 10^{19} neutrons per cm^2 (for fast neutrons). At values of $3 \cdot 10^{17}$ to $7.5 \cdot 10^{18}$ neutrons per cm^2 , two-dimensional defects appear, oriented in the {100} and {111} planes of the initial crystal. These defects are described as two-dimensional zones having scattering capacities differing from average values. The dimensions of these two-dimensional zones change in similar fashion with an increase in integral flux and with an increase in temperature during annealing

Card 1/2

ACCESSION NR: AP4039393

of the crystal (for any particular radiation dose). On the basis of changes in the effects of two-dimensional diffraction during irradiation and during annealing, and also because of similarities in two-dimensional diffraction in deformed and irradiated crystals, it is suggested that the most probable origin of the two-dimensional zones is related to segregations of vacancies in the {100} and {111} planes. In addition to the two-dimensional zones in LiF crystals irradiated by a flux greater than $3 \cdot 10^{17}$ neutrons per cm^2 , one may observe defects oriented relative to the initial crystal that create effects of one-dimensional diffraction along {100}. Orig. art. has: 1 figure.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 16Sep63

ATD PRESS: 3081

ENCL: 00

SUB CODE: SS, IC

NO REF SOV: 005

THE: 006

Card

2/2

L 2469-66 LNP(e)/EWT(m)/EPF(c)/EMP(i)/EPF(n)-2/EMP(b)

GG/WH

ACCESSION NR: AP5022714

UR/0181/65/007/009/2730/2734

AUTHOR: Kolontsova, Ye. V.; Telegina, I. V.

TITLE: Structural changes in α -quartz irradiated with neutrons

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2730-2734

TOPIC TAGS: crystal structure, crystal deformation, crystal dislocation, crystal lattice dislocation, neutron irradiation, irradiation damage

ABSTRACT: To determine the character of the structural changes in α -quartz during irradiation with neutrons, x-ray photographs were taken of irradiated and nonirradiated quartz single crystals at temperatures of -186, 20, and 750C. It was found that interlinked displacements of atoms under the effect of irradiation appear in quartz crystals. At a definite stage of irradiation ($>10^9$ n·cm⁻² and $<5 \times 10^{19}$ n·cm⁻²) the structural conformity of the Si-O-tetrahedrons characteristic for α -quartz is distorted and the structure of the irradiated crystal can be described as β -type quartz. This reorientation of the Si-O-tetrahedrons from α to β positions is linked with the displacement of atoms occurring under the effect of irradiation. The displacement occurs in a determined way in relation to the initial spatial distribution of the atoms, and the number of such displacements increases smoothly as the irradiation dose in-

Card 1/2

L 2469-66

ACCESSION NR: AP5022714

creases. Annealing restores the crystals to their initial state. With a further increase of the integral flux ($>5 \times 10^{19} \text{ n.cm}^{-2}$ and $<7 \times 10^{19} \text{ n.cm}^{-2}$), a structure differing from that of β -quartz appears. The parameters of this structure are similar to those of α - and β -quartz. This modification has sufficient stability to withstand lengthy high-temperature annealing. The initial structure of crystals obtained at $5 \times 10^{19} \text{ n.cm}^{-2}$ is fully recovered after prolonged (of the order of 50 hr) annealing at 600C. The structure of crystals obtained at $7 \times 10^{19} \text{ n.cm}^{-2}$ does not change after 50 hr annealing at 700C. Failure to restore original structure is attributed to fragmentation and polygonization of the crystal during annealing. The first indication of polygonization appears at an annealing temperature of 450C. [JA]

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 05Apr65

NO REF SOV: 009

ENCL: 00

OTHER: 014

SUB CODE: 55NP

ATD PRESS: 4/165

Card 2/2

ACC NR: AP6037007

(A, N)

SOURCE CODE: UR/0181/66/008/011/3412/3414

AUTHOR: Kolontsova, Ye. V.; Telegina, I. V.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Structural variations in quartz during the $\alpha \rightarrow \beta$ transition and following neutron irradiation

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3412-3414

TOPIC TAGS: quartz, phase transition, neutron irradiation, neutron scattering, temperature dependence, atomic property

ABSTRACT: This is a continuation of earlier work (FTT v. 7, 27, 1965) dealing with phase transitions induced in quartz by neutron irradiation. The authors compare the changes as recorded by the diffuse-scattering method or by the Lane method when a quartz is heated, with the structural transformations observed in a quartz following neutron irradiation. The results show that with increasing temperature the temperature $\alpha \rightarrow \beta$ transition is quite close to the structural changes which are observed in a quartz bombarded with neutrons at fluxes from 10^{19} to $(5 - 6) \times 10^{19}$ neut/cm². Evidence in favor of this statement is afforded by the gradual nature of the diffuse scattering and by comparisons of the behavior of the Lane maxima and the diffuse

Card 1/2

ACC NR: AP6037007

maxima. The authors interpret the closeness of the structural transitions as a natural result of the fact that the transitions are results of displacements, which should exert the same effect on the atomic fields irrespective of the causes of the displacements. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Mar66/ ORIG REF: 005/ OTH REF: 002

Card - 2/2

TELEGINA, K.A.; SHABYKIN, G.P.

Benign reticuloendotheliosis of the skin. Vest.derm.i ven. 34
no.10:76-78 '60. (MIRA 13:11)

1. Iz Ufinskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - starshiy nauchnyy sotrudnik P.N. Shishkin, nauchnyy rukovoditel' - starshiy nauchnyy sotrudnik G.E. Shinskiy).

(SKIN--TUMORS)

TELEGINA, K. A., mladshiy nauchnyy sotrudnik

Cytodiagnosis of some dermatoses. Vest. dermat. i ven. no.3:33-37
'62. (MIRA 15:6)

1. Iz Ufimskogo kozhno-venerologicheskogo instituta (dir. -
starshiy nauchnyy sotrudnik P. N. Shishkin, nauchnyy rukovoditel' -
starshiy nauchnyy sotrudnik G. E. Shinskiy)

(SKIN—DISEASES)
(DIAGNOSIS, CYTOLOGIC)

TELEGINA, K.A.; MATVEYEV, N.A., kand. med. nauk

Results of bacteriological examination of the blood of patients
with lupus erythematosus. Sov. Med. 26 no.9:140-142 S '62.

(MIRA 17:4)

1. Iz Ufinskogo kozhno-venerologicheskogo inatituta (dir. P.N.
Shishkin) i Instituta vaktsin i syvorotok (dir. - kand. med.
nauk U.S. Yénikeyeva).

SHINSKIY, G. E.; TELEGINA, K. A.; SHEKHOVTSOVA, V. N.

Use of vitamin E in treating lupus erythematosus. Vest. dermat. i ven. 36 no.7:64-66 J1 '62. (MIRA 15:7)

1. Iz Ufinskogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya RSFSR (dir. P. N. Shishkin, nauchnyy rukovoditel' G. E. Shinskiy)

(LUPUS ERYTHEMATOSUS) (TOCOPHEROL)

SHINSKIY, G.E.; MIKHAYLOVA, Ye.A.; SHEKHOVTSOVA, V.N.; FEL'DMAN, I.Ye.;
GABITOVA, R.G.; TELEGINA, K.A.

Experience with outpatient service in lupus erythematosus.
Sov. med. 27 no.1:151-153 Ja '64. (MIRA 17:12)

1. Ufimskiy kozhno-venerologicheskiy institut (direktor P.N.
Shishkin nauchnyy rukovoditel' G.E. Shinskiy, konsul'tant -
prof. N.S. Smelov).

TELEGINA, K.A.

Results of using juglone in neurodermatitis. Sov. med. 28 no.5:
110-113 My '65. (MIRA 18:5)

1. Ufimskiy nauchno-issledovatel'skiy kozhno-venerologicheskoy
institut (dir. P.N.Shishkin, nauchnyy rukovoditel' G.F.Sainskiy
konsul'tant - chlen-korrespondent AMN SSSR prof. P.V Kozhevnikov).

TELEGINA, K.A.

Dynamics of microflora on diseased and healthy skin in
neurodermatitis during juglone therapy. Vest. dermat. i ven.
no.1:31-37 '65. (MIRA 18:10)

1. Ufimskiy kozhno-venerologicheskii institut (dir. P.N. Shishkin,
nauchnyy rukovoditel' G.E. Shinskiy, konsul'tant .. chlen-korrespondent
AMN SSSR prof. P.V. Kozhevnikov).

L 08798-67 EWT(m)/EWP(j) IJP(c) WW/RM
 ACC NR: AP6030851 (A,N) SOURCE CODE: UR/0191/66/000/009/0040/0042

AUTHOR: Li, P. Z.; Mikhaylova, Z. V.; Bykova, L. V.; Chertok, O. M.; Volkov, B. V.;
Zaslavskiy, N. N.; Telegina, L. I.; Novikova, T. V. 34

ORG: none

TITLE: Moisture resistance and chemical stability of unsaturated polyester resins
modified with colophony

SOURCE: Plasticheskiye massy, no. 9, 1966, 40-42

TOPIC TAGS: solid mechanical property, polyester plastic, synthetic material, physical chemistry property, stability constant

ABSTRACT: Moisture resistance and oxidation stability of two commercial resins modified with colophony, resin PN-10-⁶ a copolymer of an unsaturated ester with styrene and resin TGM-3-⁶ (a copolymer of an unsaturated ester and polyacrylate) and some glass laminates based on these two resins were investigated. The physical properties of the colophony-modified resins are tabulated. The tensile strength of the colophony-modified resins and the glass-laminates based on them was practically unaffected after holding in water or 25% sulfuric acid for 7-360 days. In general, the addition of colophony was found to be beneficial with respect to water resistance and chemical stability of the unsaturated polyester resins. Orig. art. has: 1 figure and 3 tables.

SUB CODE: 11/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 006
 Cord 1/1 nst UDC: 678.674.9:547.914.2]:678.079.3

ZAMYATIN, M. M. kand.tekhn.nauk; BALUYE, T. A., inzh.; prinimali
uchestva MAKAROV, A. I.; ZIMIN, N. V.; TELEGINA, M. P.; ZAYTSEVA,
G. V.

Study of chemical and thermal processes in the treatment of steel
components with high-frequency induction heating. Trudy NII TVCH
no.1/2:116-126 '60. (MIRA 17:7)

TELEGINA, n. k.

TELEGINA, M.K.

Indoor floriculture in the school. Biol.v shkole no.1:65-66
Ja-F '57. (MLRA 10:5)

1.Uchitel'nitsa shkoly No. 542 goroda Moskvyy.
(Moscow--Floriculture--Study and teaching)

MAKIN, S.M.; TELEGINA, N.I.

Chemistry of unsaturated ethers. Part 9: Alkoxylation of furan.
Synthesis of dialdehydes and glycols. Zhur.ob.khim. 32 no.4:
1104-1111 Ap '62. (MIRA 15:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Furan) (Alkoxy groups) (Glycols)

GURTOVOY, G.K.; TELEGINA, O.F.

Formation of a conditioned reflex connection between visual and
motor analysors with respect to the color and weight of objects.
Trudy Inst.biol.fiz. no.1:200-204 '55. (MIRA 9:9)
(CONDITIONED RESPONSE) (HEARING) (SIGHT)

TELEGINA, T.D.

Side effects of vitamin B₁₂. Vest.derm.i ven. 33 no.5:87-88 8-0 '59.
(MIRA 13:2)

1. Iz TSentral'noy polikliniki Ministerstva vnutrennikh del SSSR.
(CYANOCOBALAMINE)

PAVLOVICHENKO, K.V. [Pavlovichenko, K.V.]; SHEVCHUK, A.M. [Shevchuk, A.M.];
OSIACH, Y.I. [Osiach, Y.I.]; TELEGINA, T.Y. [Telegina, T.Y.]

Kinetics of the catalytic transformation of octylmercaptan.
Vestnik AN BSSR. Ser. fiz.-tekh. nav. no.4:78-84 '63.

(MIRA 27:12)

SOLOVEY, D.Ya., kand.khimicheskikh nauk; Prinimali uchastiye:
ROGACHEVA, O.I., inzh.; TELEGINA, V.V., inzh.; KOBZEVA, L.I.,
tekhnik; BLIOKH, M.B., laborant; YUSOVA, V.I., laborant

Corrosion resistance of reinforcement in silica concrete.
Stroi.mat. 8 no.1:7-10 Ja '62. (MIRA 15:5)
(Concrete reinforcement--Corrosion)

ARRIGONI, I.M., TELEGINA, Yu.K.

Hygienic evaluation of standard textbooks used in medical schools.
Trudy LSGMI 45:67-74 '58 (MIRA 11:11)

1. Kafedra gigiyeny detey i podrostkov Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. A.Ya. Gutkin).

(TEXTBOOKS--HYGIENIC ASPECTS)

TELEGINA, Z.P.

KUZNETSOV, S.I.; TELEGINA, Z.P.

Some data on the physiology of propane-oxidizing bacteria [with summary in English]. Mikrobiologiya 26 no.5:513-518 S-O '57.
(MIRA 10:12)

1. Institut mikrobiologii AN SSSR i Promyslovo-geokhimicheskaya ekspeditsiya nauchno-issledovatel'skogo instituta geofizicheskikh i geokhimicheskikh metodov razvedki Ministerstva okhrany nedr, Moskva.

(MYCOBACTERIUM,
propane-oxidizing strains (Rus))
(PSEUDOMONAS,
same)

TELEGINA, Z.P.; SMIRNOVA, Z.S.

Effect of organic substances on the intensity of propane oxidation
in *Mycobacterium lacticolum* and *Pseudomonas* species. Trudy Inst.
mikrobiol. no. 6:110-115 '59. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy
neftyanoy institut.

(MYCOBACTERIUM LACTICOLUM) (PSEUDOMONAS) (PROPANE)

TELEGINA, Z.P.

Distribution and species-make up bacteria, oxidizing gaseous hydrocarbons in underground waters of gas fields in the Kuban-Azov Lowland. Trudy Inst.mikrobiol. no.9:131-133 '61. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.
(Kuban-Azov Lowland--Water, Underground--Microbiology)

TELEGINA, Z. P.

Relation of some species of bacteria which oxidize gaseous hydrocarbons to hydrocarbons of the paraffin series. Mikrobiologiya 30 no.3:426-430 My-Je '61. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy institut, Moskva.

(MYCOBACTERIACEAE) (PSEUDOMONADACEAE)

TELEGINA, Z.P.

Carbon balance during propane oxidation by a culture of Mycobacterium
lacticolum. Mikrobiologii 30 no.5:912-916 S-0 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut.

(MYCOBACTERIUM LACTICOLA)
(CARBON)

(PROPANE)

TELEGINA, Z.P.; SUBBOTA, M.I.; NIKITINA, Ye.A.

Characteristics of the distribution of hydrocarbon-oxidizing bacteria in the waters of the cross section of the Istaskent oil and gas field. Mikrobiologiya 32 no.1:33-38 '63
(MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut yadernoy geofiziki i geokhimii.

TELEGINA, Z.P.

Study of adaptability of individual species of saprophytic
microflora to the oxidation of gaseous hydrocarbons. Mikro-
biologiya 32 no.3:398-402 My-Je '63 (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut yadernoy
geofiziki i geokhimii.

TELEGINA, Z. P.

"Some findings on bacteria which develop in an atmosphere of butane."
report scheduled to be presented at the Intl Symp on Microbiology of Crude Oil,
Brno, 5-7 Oct 64.

ANCUSA, M.; CEAUSESCU, D.; PIRVI, F.; ROSIU, I.; IONESCU, E.; TELEGUT, M.

Some aspects of the water of the artesian wells in the region of
Timisoara. Studii chim Timisoara 6 no.1/2:137-143 Ja-Je '60.
(EEAI 10:3)

1. Institutul de igiena si sanatate publica R.P.R., Filiala
Timisoara, Sectia de igiena comunala.
(Rumania--Water) (Artesian wells)

ANCUSA, M.; IONESCU, E.; TELEGUT, M.

Hydrobiological studies in the natural basin of the Birzaya River.
Studii agr Timisoara 8 no.3/4:237-253 J1-D '61.

1. Institutul de igiena si sanatate publica R.P.R., Filiala Timisoara,
Sectia de Igiena Comunala.

TELEGUT, M.

Water protection in Banat. Studii agr Timisoara 8 no.3/4:329-333
Jl-D '61.

ANGUSA, M.; IONESCU, Elena; RELEGUT, M.; CEAUSESCU, D.; PIRVU, Filofteia;
ROSIU, Ileana

Considerations on the organisms in the artesian wells. Studii agr
Timisoara 9 no.3/4:325-335 J1-D '62.

1. Sectia de Igiena Comunala a Institutului de Igiena R.P.R. Filiala
Timisoara.

232

2. "Occupational Cancer of the Skin in Oil Refineries and the Machine Industry," Prof. P. Muto; pp 97-111.

2. "The histopathologic basis of fibrous structured mastitis in mammoconiosis," Dr B. BARBAD, Dr Rodica FILIPA and Dr L. PĂRĂȘCU. Work performed at the RPN Institute of Hygiene and Infectious Diseases (Institutul de Igienă și Infecțiune Publică al IRI); pp 113-123.

[illegible]

h. "Extractions of electrolytes from the skin mass." Dr. S. J. Waring, Conditions Prevailing in Coal Pits (Candidate in Medical Sciences (Candidate in Chemistry (Medical)); PP III-III).

5. "Defiance and Anxiety Considerations on the Path of Progress in the Field of Heat Balance," Dr. M. ALGER, JR., *Proc. 19th Int. Cong. on Heating, Vent., Air-Cond., and Refrigeration*, 1959, vol. 1, pp. 1031-40. *See also* the *Int. Institute of Refrigeration and Air Conditioning* (Institution of Agents and Consultants, 10000 Peachtree Road), Commercial Division Section on Climate Control (Atlanta, Georgia) (Atlanta Transactions, Section on Human Comfort); *Defiance* (Atlanta); pp. 145-156.

[illegible]

7. Contributions to the Study of water supply, Dr A. JARVIS, Dr A. FRISL and Dr Lucia VINT.
Not performed at Regional Sanepid (Sanepid) See LOMK
Dobudja: pp 163-165.

Telegut, M.

RUMANIA

ANCUTA, M., MD; ROSCOVANU, A.; TELEGUT, M.; GAITA, I.

Section of Communal Hygiene of the Institute of Hygiene of
the R.P.R., Timisoara Branch (Sectia de igiena comunală a
Institutului de igiena R.P.R., Filiala Timisoara) - (for all)

Bucharest, Igiena, Vol XII, No 1, Jan-Feb 63, pp 71-78.

"Changes due to Phenol in the Taste and Smell of Drinking water
from a Central Supply Station of Drinking Water."

(4)

TELEHA, M.; MASIAR, P.

On hemoglobin. Part 13: Peptide structures around arginine and lysine residues in the molecule of some mammalian hemoglobins and the liberation of the peptide bonds by the action of trypsin. Coll Cz Chem 27 no.5:1284-1291 My '62.

1. Department of Biochemistry, Medical Faculty of the P. J. Safarik University, Kosice.

MASIAR, P.; TELEHA, M.; VNEK, J.

On hemoglobin. Pt. 18. Coll Cz Chem 28 no.1:271-274 Ja '63.

1. Department of Biochemistry, Medical Faculty, P.J. Safarik
University, Kosice.

GAJEWSKI, Stanislaw; TELEJKO, Zdzislaw; ZALEWSKI, Jozef

Comparative evaluation of pantocaine, xylocaine and cyclaine
for topical anesthesia. Wiad. lek. 18 no.5:403-405 1 Mr '65

1. Z Wojewodzkiej Przychodni Przeciwwgruzliczej w Bialymstoku
(Dyrektor: dr. S. Gajewski).

TELEK, Eva

New equipment in the headquarters of the Hungarian Federation of
Technical and Scientific Associations. Musz elet 18 no.17:2
15 Ag '63.

TELEK, Eva

The 4th Conference on Welding. Musz elet 18 no.20:2 26 S '63.

TELEK, Eva

Conference on plastics in the construction industry. Musz elet
18 no.22:2 24 0 '63.

TELEK, Eva

Congress on the Sio Canal. Musz elet 18 no.23:2 7 N '63.

TELEK, Eva

Description of new methods at the galvanization symposium.
Musz ele 18 no.25:2 5 D '63.

1
t

TELEK, Eva

Plans of the Division for International Relations of the
Federation of Technical and Scientific Associations for
the next year. Musz elet 18 no.26: 2 19 D '63.